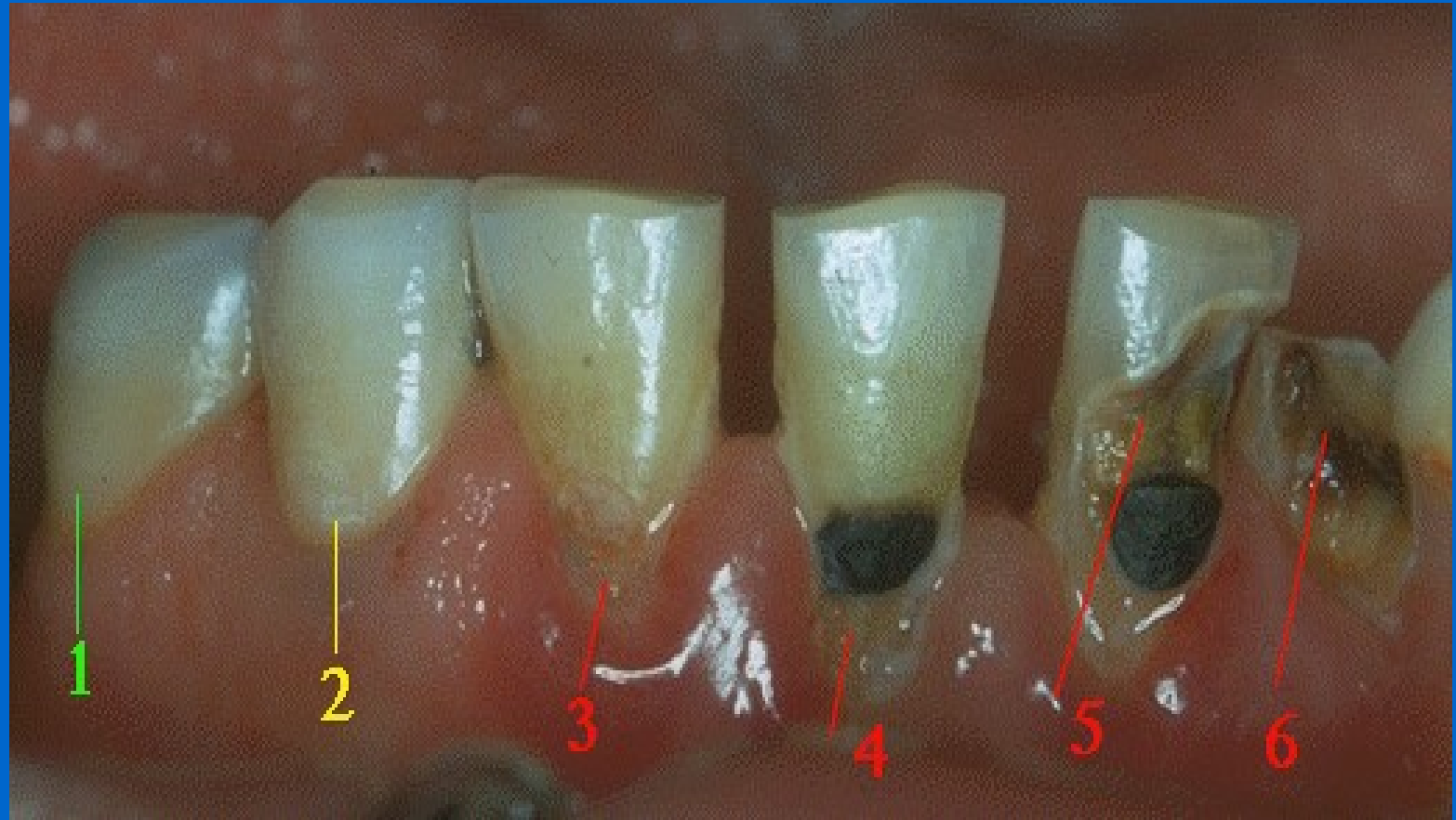




CARIOLOGY

DENTAL CARRIES-WHAT IS THAT



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‘CARIES’ IS LATIN FOR “ROT”

‘DENT’ IS LATIN FOR “TOOTH”

DENTAL CARIES = “**ROTTEN TEETH**”





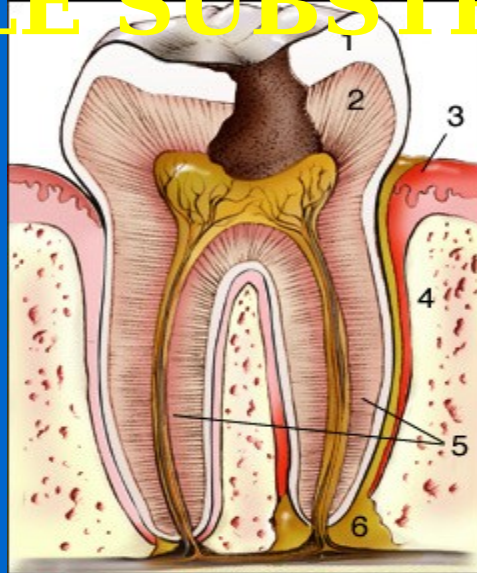
DENTAL CARIES IS A DEMINERALIZATION
OF THE TOOTH SURFACE CAUSED BY
BACTERIA.

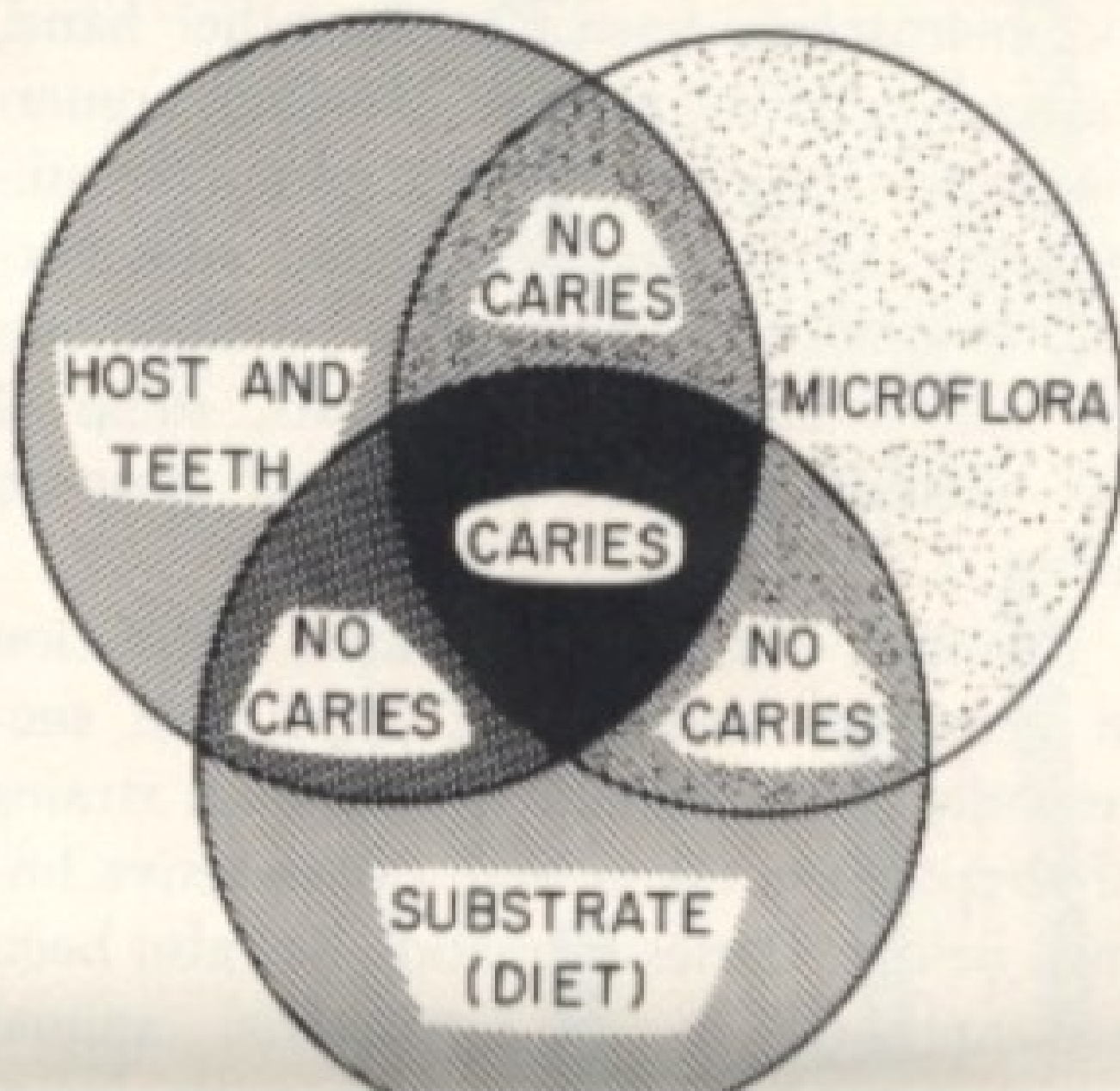
This is one of the most common disorders,
second only to the common cold.

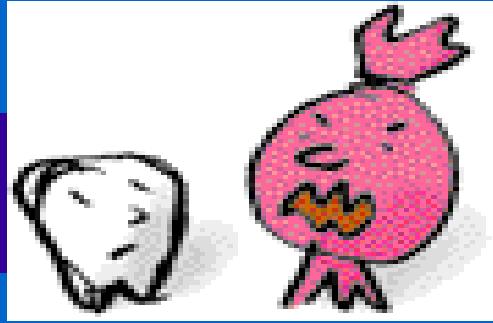


THREE FACTORS MUST BE PRESENT FOR DENTAL CARIES TO RESULT:

1. A SUSCEPTIBLE TOOTH SURFACE
2. PROPER MICROFLORA (BACTERIA)
3. A SUITABLE SUBSTRATE (FOOD, SUGAR)







BACTERIA + FOOD (SUGAR)= ACIDS

BACTERIA+FOOD+ACID+SALVIA= PLAQUE

PLAQUE ADHERES TO TEETH



ACIDS IN **PLAQUE** DISSOLVE THE ENAMEL
SURFACE OF TEETH (DEMINERALIZATION)

THIS RESULTS IN A HOLE IN THE
TOOTH

CALLED A **CAVITY**.

ACIDS BEGIN TO DISSOLVE TOOTH
ENAMEL WITHIN WHAT TIME?

20 MINUTES

BACTERIA

WHAT IS THE MAIN TYPE OF
BACTERIA IN THE ORAL CAVITY???

MUTANS STREPTOCOCCI

ADHERES WELL TO TOOTH STRUCTURE

PRODUCES INCREASE AMOUNTS OF ACID

HIGH CARRIES= 2-10% OF S. MUTANS IN PLAQUE

LOW RISK= LESS THAN 1% S.MUTANS IN PLAQUE

HOW ARE WE INFECTED WITH THE BACTERIA

FOR THE FIRST TIME?

PARENTS AND PLAYMATE'S

MOUTHS.

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CARRIES DEPEND ON DIETARY SUCROSE

S. MUTANS +(GLUCOSE/FRUCTOSE)=
POLYSACCHARIDES

POLYSACCHARIDES= INCREASE IN THE THICKNESS
OF PLAQUE AND CHANGES THE PLAQUE FROM A
LIQUID FORM TO A GEL FORM

THIS GEL PLAQUE ALLOWS ACID TO COME IN
CONTACT WITH THE TOOTH AND PROTECTS
THE ACID FROM THE SALIVA (BUFFER).

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INCREASE SUGAR IN THE
DIET=
INCREASED CARIES RATE!
SITES AFFECTED:

1.PITS/FISSURES

2.CONTACT AREAS

3.GINGIVAL MARGINS

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CARRIES IS DRIVEN BY FREQUENCY OF EATING

A FREQUENT EATING PATTERN INCREASES
CARRIES RISK.

THE pH OF PLAQUE FALLS WITHIN SECONDS
CONTACT WITH DIETARY SUGARS.

THE pH CAN STAY LOW FOR UP TO TWO
HOURS.



CARIES IS MODIFIED BY FLUORIDE

TOPICAL FLUORIDE INHIBITS ACID PRODUCTION
BY PLAQUE BACTERIA.

FLUORIDE IN FOOD AND DRINKS, DENTIFRICES,
ORAL RINSES, GELS, AND FILLING MATERIALS
CAN THEREFORE ALL REDUCE THE SOLUBILITY
OF TEETH, HELPING TO REDUCE CARIES RISK



CARIES IS MODIFIED BY SALIVA

HIGH FLOW-RATE SALIVA IS A VERY EFFECTIVE BUFFER.

FLOW INCREASES NATURALLY DURING VIGOROUS CHEWING.

A MAXIMUM SALIVARY FLOW RATE OF LESS THAN .7ML/MIN IS EQUAL TO A HIGH CARIES RISK.

CARIES RISK MANAGEMENT

LOW CARIES RISK

□ NO CAVITATED OR ACTIVE CARIOUS LESIONS

□ NO INCIPIENT OCCLUSAL OR INTERPROXIMAL LESIONS

□ NO FEWER THAN 4 LOCALIZED WHITE SPOT

LESIONS

CARIES RISK MANAGEMENT

MODERATE CARIES RISK

- ONE OR MORE CAVITATED OR ACTIVE CARIOUS LESIONS
- INCIPIENT OCCLUSAL OR INTERPROXIMAL LESIONS WITHOUT CAVITATION
- FOUR OR MORE WHITE SPOT LESIONS.
(40% RECRUIT/20% ACTIVE DUTY)

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CARIES RISK MANAGEMENT

HIGH CARIES RISK

▣ PATIENTS WITH 4 OR MORE CAVITATED OR ACTIVE LESIONS. (35% RECRUIT POPULATION AND 4% ACTIVE DUTY)

MODERATE/HIGH CARIES RISK PROTOCOL

- PROFESSIONAL FLUORIDE TREATMENT
- ORAL HYGIENE INSTRUCTIONS
- SEALANTS PLACED IN PITS AND FISSURES
- DISEASE EDUCATION INCLUDING DIET AND CARIES RELATIONSHIP.
- MODERATE: ONE-YEAR RECALL
HIGH: THREE-MONTH RECALL

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SUMMARY: HOW TO REDUCE YOUR RISK OF TOOTH DECAY

1. REDUCE THE NUMBER OF TIMES PER DAY YOU
EAT REFINED CARBOHYDRATES.
2. BRUSH YOUR TEETH THREE TIMES A DAY WITH
FLUORIDE TOOTHPASTE.
3. USE A FLUORIDE MOUTH RINSE AT BEDTIME.
4. CHEW SUGARLESS GUM.